Goal

1

All youth have access to resources that promote optimal physical and mental health.

A Shared Vision:
All Massachusetts youth grow up to be
healthy, caring and economically self-sufficient adults.

Healthy People 2010, the national blueprint for improving health status in the United States in this decade, identifies 21 critical national objectives for adolescent health. *A Shared Vision* has adopted these objectives, and their associated indicators, as the framework for assessing the health of youth in Massachusetts in relation to Goal 1.

These 21 critical objectives reflect the major public health concerns for American youth today - physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental quality, immunization and access to health care. For each objective, a leading indicator has been established. Most of the indicators are based on existing national and state-based data sources, but several are still in developmental stages of identifying appropriate data. For all but the developmental indicators, Healthy People 2010 has established an improvement target to achieve by 2010.

While Massachusetts collects data on each of these leading indicators, from time to time the Healthy People 2010 definition of the indicator and/or the national data collection methodology differs from that in Massachusetts. In these cases, the HP 2010 target is not displayed because of the non-comparability of data.

PHYSICAL ACTIVITY

Regular physical activity is important for overall health and chronic disease prevention. Youth participation in sports and regular aerobic exercise has the additional benefit of being associated with lower rates of cigarette smoking, marijuana use, recent sexual activity, and serious depression (MYRBS, 2001).

Healthy People 2010 Adolescent Objective 22-07: Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardio-respiratory fitness 3 or more days per week for 20 or more minutes per occasion.

In 2001, fewer than two-thirds of high school students in Massachusetts participated in sufficient vigorous physical activity, below the national average and well below the HP2010 target of 85% (Table 1-1).

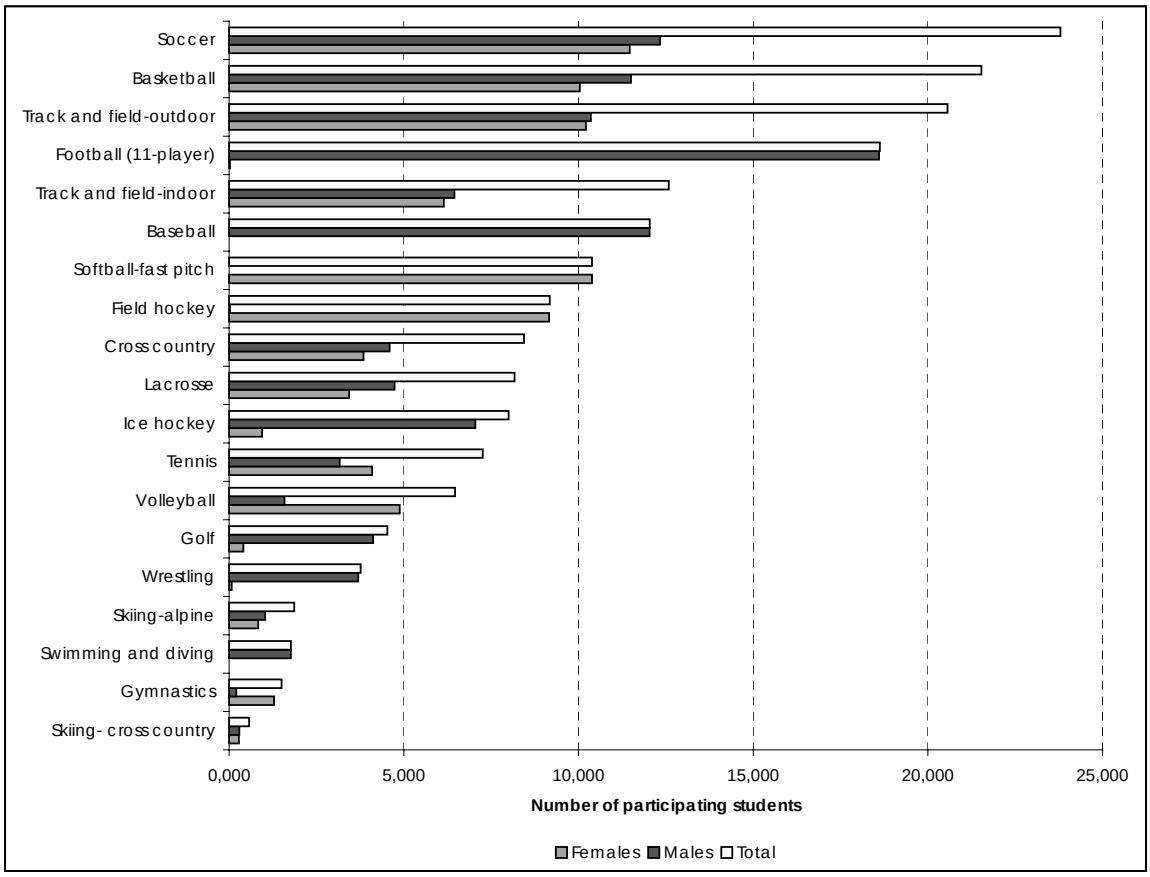
Table 1-1. Percentage of high school students participating in sufficient vigorous physical activity Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
63%	65%	85%

Source: MYRBS, 2001; YRBSS, 2001

- Girls are less physically active than boys, and exercise levels overall decline in higher grade levels (MYRBS, 2001).
- Since 1993, Massachusetts has had a net decrease in both youth team sports participation and youth enrollment in physical education classes. The number of high school students who reported playing on a sports team in the last year has declined from 62% in 1993 to 54% in 2001 (MYRBS, 2001).
- In the 2000-2001 school year, 185,053 Massachusetts high school students participated in a wide variety of interscholastic sports (Figure 1-1) (National Federation of State High School Associations 2001).
- The most popular sport is soccer, with 17% of 10-14 year olds and 2.4% of 15-19 year olds participating in 2000-01 (Massachusetts Youth Soccer Association, 2000-2001).
- In 2000, only 24.3% of Massachusetts young adults ages 18-24 with a disability participated in regular physical activity, compared to 31.3% of all young adults (MBRFSS, 2000).

Figure 1-1. High school student participation in interscholastic sports, by sport and gender
Massachusetts 2001



Source: National Federation of State High School Associations, 2001

OVERWEIGHT AND OBESITY

Being overweight or obese[1] is a significant risk factor for the development of diabetes, heart disease, and other chronic diseases. Yet the number of overweight and obese children, youth and adults has increased dramatically in the past two decades, reaching proportions that have been called epidemic by the Surgeon General. Nationally, three times as many adolescents were overweight in 2000 as in 1980 (US Department of Health and Human Services, 2001).

Unhealthy dietary patterns and inadequate physical activity both contribute to overweight and obesity. Adolescence is a crucial time when youth can develop eating habits and behaviors that set the course for their health and well-being into adulthood.

[1] See *Technical Notes* for definitions of overweight and obese, and for body mass index calculations.

Healthy People 2010 Adolescent Objective 19-03 b: Reduce the proportion of children and adolescents who are overweight or obese.

Ten percent of high school students in Massachusetts are overweight, similar to the national average, but double the Healthy People 2010 benchmark (Table 1-2).

Table 1-2. Percentage of high school students who are overweight or obese
Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
10%	10.5%	5%

Source: MYRBS, 2001; YRBSS, 2001

- An additional 15% of high school students were at risk for overweight, based on their body mass index (MYRBS, 2001).
- Nationally, high school males are more likely to be overweight than females (13.5% vs. 6.3%) (YRBSS, 2001).
- Nearly half (47%) of Massachusetts high school students in 2001 were currently trying to lose weight (MYRBS, 2001).
- In 2000, 11.4% of Massachusetts young adults ages 18-24 with a disability were obese, compared to 7.3% of all young adults (MBRFSS, 2000).
- High levels of sedentary behavior may be contributing to excessive weight gain. One-third of Massachusetts high school students watched three or more hours of television on school days (MYRBS, 2001).
- Twenty percent of high school students who had an actual weight within healthy normal limits viewed themselves as overweight. This distorted body image was almost three times as common among females (29.3%) as among males (10.7%) (MYRBS, 2001).
- Only 13% of Massachusetts high school students and 27.5% of young adults ages 18-24 consumed the recommended intake of five fruits and vegetables per day (MYRBS, 2001, MBRFSS, 1998-2000).
- Fewer than one-fifth of high school students (18%) drank three or more glasses of milk per day, the amount that would supply the recommended level of calcium for youth (MYRBS, 2001).

SUBSTANCE ABUSE

Adolescence and young adulthood are high-risk periods for experimenting with alcohol, tobacco, and other drugs. Alcohol and cigarettes are the most commonly used substances by high school students.

TOBACCO USE

Smoking cigarettes (see box for definitions of smoking) or using other tobacco products, a habit often acquired during the teenage years, is known to be associated with a variety of health problems later in life such as cancer, chronic respiratory illness, heart disease, and stroke. The earlier the age at which people begin to smoke, the greater will be their permanent lung damage and the more likely they are to become heavily addicted (MYRBS, 2001; Wiencke, 1999; US Department of Health and Human Services, 1995). In addition to being a serious health threat, adolescent tobacco use is also associated with alcohol and illicit drug use and with poor school performance (MYRBS, 2001; Johnston, 1987).

Definitions of Smoking

Current smoking: the respondent smoked cigarettes on one or more of the 30 days preceding the survey.

Lifetime smoking: the respondent ever tried smoking cigarettes, even one or two puffs.

Healthy People 2010 Adolescent Objective 27-02 a: Reduce tobacco use by adolescents.

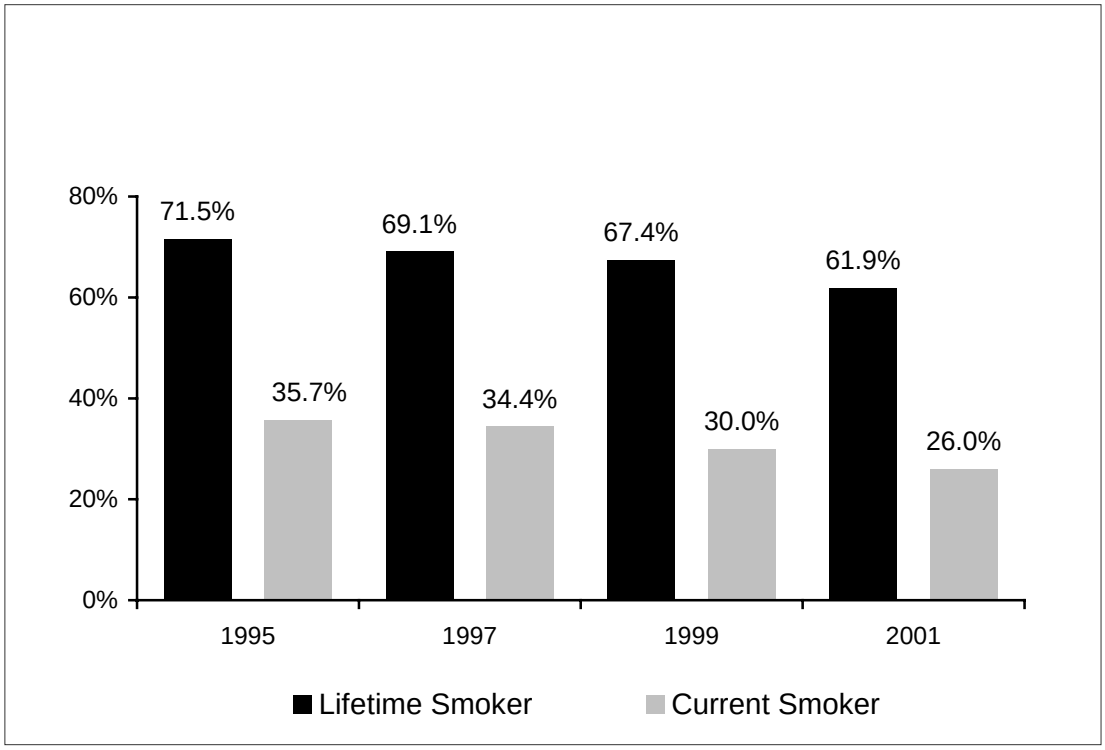
In 2001, about a quarter (26%) of high school students were current cigarette smokers, somewhat less than the national average (Table 1-3).

Table 1-3. Percentage of high school students who are current smokers
Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
26%	28%	21%

Source: MYRBS, 2001; YRBSS, 2001

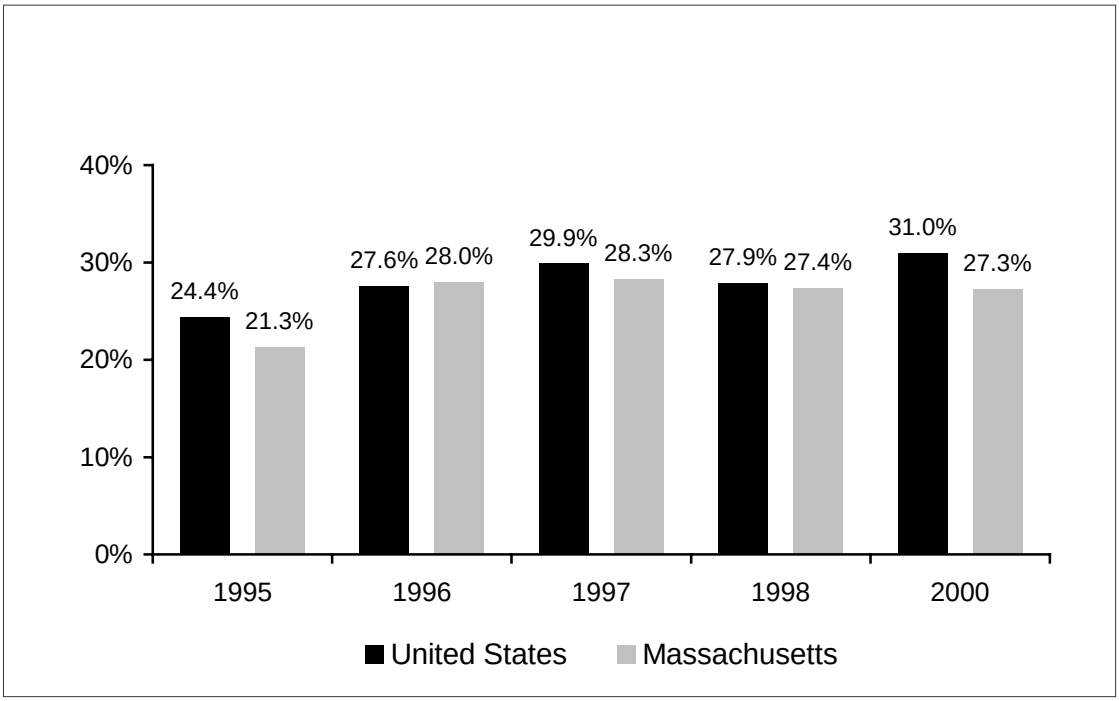
Figure 1-2. Percentage of high schools students who are lifetime and current smokers
Massachusetts, 1995 to 2001



Source: MYRBS, 2001

- Since 1995, there has been a significant decrease in the proportion of high school students who are current smokers or lifetime smokers (Figure 1-2) (MYRBS, 2001).

Figure 1-3. Percentage of young adults ages 18-24 who are current smokers
Massachusetts and United States, 1995 to 2000



Source: MBRFSS, 2000

Young Adult Population

- In 2000, 27% of young adults ages 18-24 were current smokers, lower than the national prevalence of 31%. However, since 1997, current smoking rates in this age group have not significantly declined (Figure 1-3) (MBRFSS).
- In 1999, 62% of adults reported living in a home where smoking is not allowed, an increase from 38% in 1992. Of young adults, ages 18-24, 54% reported living in a home where smoking is not allowed (MBRFSS, 2000).

The Massachusetts Tobacco Control Program has included youth focused activities and promoted a youth development approach to public health prevention. Youth Action Alliance programs were youth skill-building programs that fostered youth leadership in tobacco control. Programs included activities such as designing and conducting attitude and behavior surveys; mapping industry advertising practices in the community; developing, passing, and enforcing a tobacco regulation or law; and advocating tobacco control through the media. Programs also offered smoking cessation and relapse prevention interventions for youth participants to prevent or interrupt habituated use. Source: MDPH, 2002

ALCOHOL USE

Consumption of alcohol, the most common drug used by youth, can pose a serious threat to health and safety. Underage drinking is a major contributing factor in approximately half of all motor vehicle crashes, homicides, and suicides -- the three leading causes of death and disability among youth (MYRBS, 2001; Perrine, 1988). Alcohol use is also a major cause of diseases such as liver cirrhosis, pancreatitis, and certain cancers (Massachusetts Youth Alcohol Prevention Task Force, 2002). Further, alcohol dependence and alcoholism are more likely to develop among people who begin drinking during early adolescence than are those who begin drinking at the legal age (MYRBS, 2001; Grant, 1997).

Binge Drinking

Binge drinking (see box for definitions of alcohol use) has been consistently linked with driving injuries and fatalities, unplanned sexual activity, physical and sexual assaults, physical injury, and criminal mischief (Massachusetts Youth Alcohol Prevention Task Force, 2002).

Definitions of alcohol use

Binge drinking: Five or more alcoholic drinks in a row, on one occasion, in the past 30 days.

Recent alcohol use: One or more alcoholic drinks on at least one of the past 30 days.

Lifetime alcohol use: Any consumption of alcohol during one's life, except one or two sips for religious purposes.

Healthy People 2010 Adolescent Objective 26-11 d: Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.

One-third of high school students engaged in at least one episode of binge drinking in 2001, higher than the national average (Table 1.4). Seven percent of students engaged in frequent binge drinking – six or more heavy drinking episodes in the past month, an average of more than once a week (MYRBS, 2001).

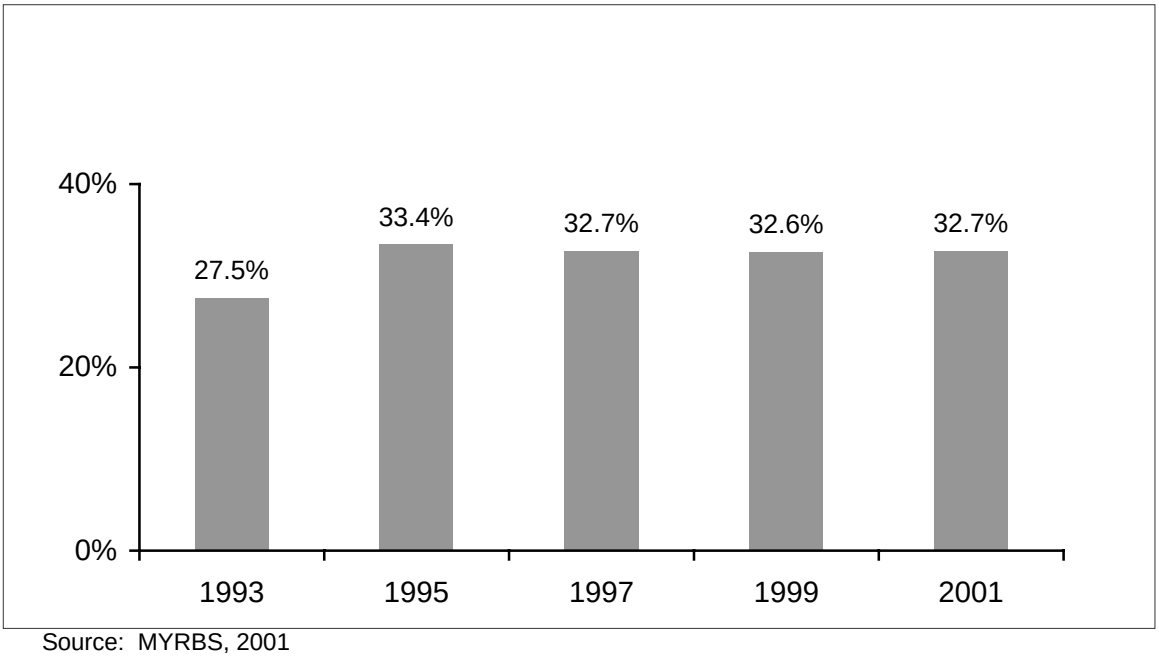
Table 1-4. Percentage of high school students who engaged in binge drinking Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
32.7%	29.9%	*

*HP2010 target is based on a different data source, and is not directly comparable.
Source: MYRBS, 2001

- Rates of binge drinking increase with grade level. In 2001, 22% of 9th graders and 36% of 12th graders engaged in binge drinking (MYRBS, 2001).
- After increasing substantially from 1993 to 1995, the rates of binge drinking have remained level over the past six years (Figure 1-4).

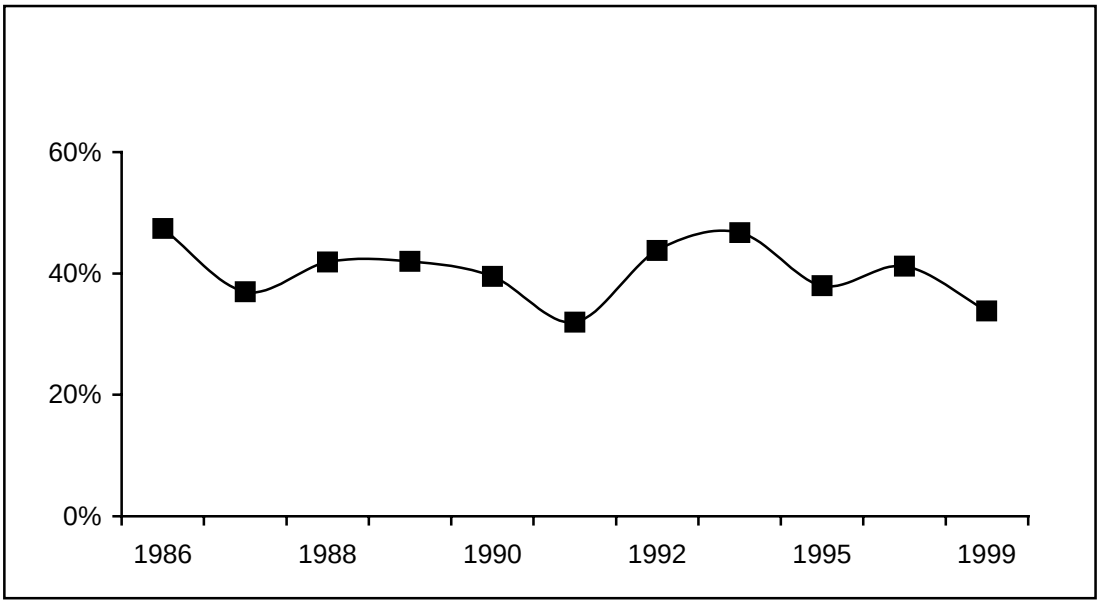
Figure 1-4. Percentage of high school students who engaged in binge drinking
Massachusetts, 1993 to 2001



Source: MYRBS, 2001

- In 1999, 34% of Massachusetts 18-24 year olds reported at least one current episode of binge drinking, a substantial decrease from 41% in 1997 (Figure 1-5) (MBRFSS, 1999).

Figure 1-5. Percentage of young adults ages 18-24 who engaged in binge drinking
Massachusetts, 1986-1999



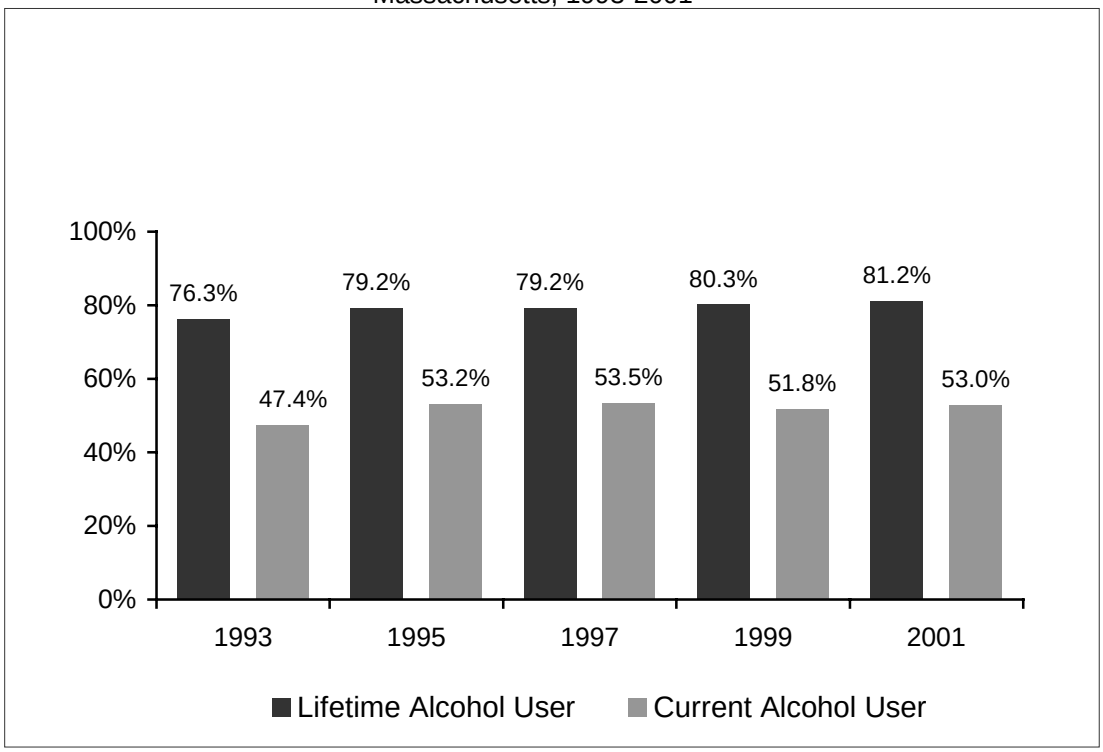
Source: MBRFSS, 1999

Other alcohol use indicators

Recent alcohol use is significantly associated with violence and injury-related risk behaviors including weapon carrying, suicide attempts, and drunk driving, as well as with other illegal drug use (Massachusetts Youth Alcohol Prevention Task Force, 2002).

- Similar to high school student binge drinking trends, the rates of lifetime and recent alcohol use among Massachusetts high school students have remained level since 1995 (Figure 1-6). In 2001, four out of five (81%) students had ever consumed alcohol, with 28% having their first drink prior to the age of 13. Over half of all high school students (53%) consumed at least one alcoholic drink in the past 30 days (MYRBS, 2001).

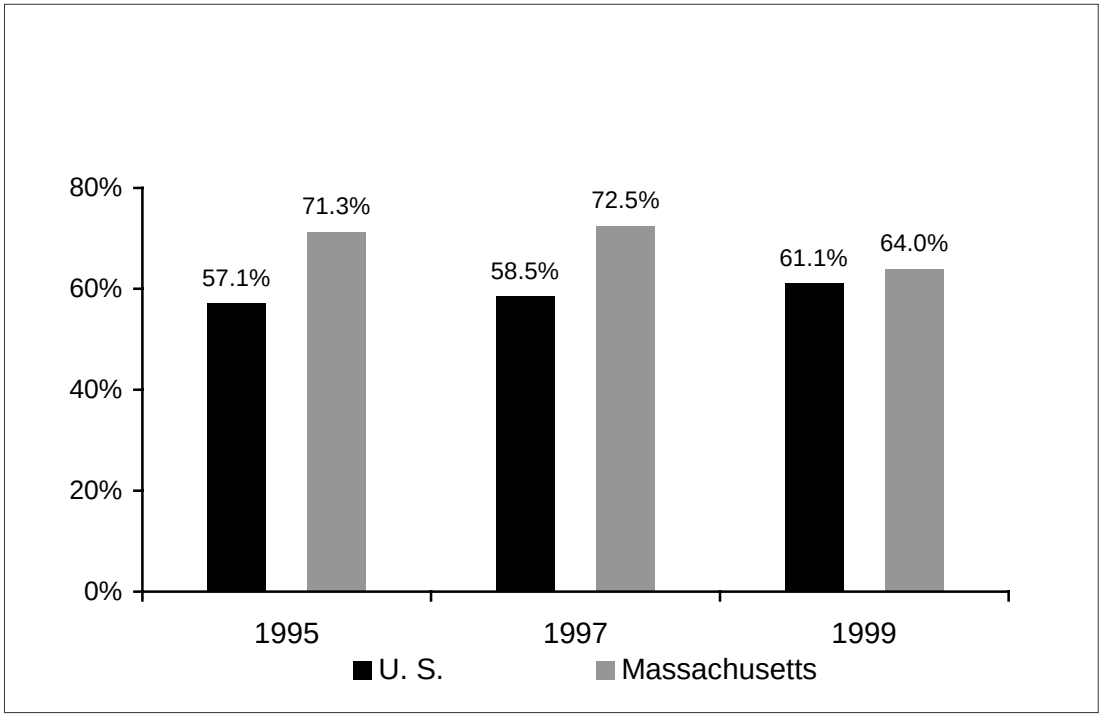
Figure 1-6. Percentage of high school students who are lifetime and recent alcohol users Massachusetts, 1993-2001



Source: MYRBS, 2001

- Among young adults ages 18-24, the rate of current alcohol consumption dropped substantially from 73% in 1997 to 64% in 1999, but still remained higher than the national rate (Figure 1-7) (MBRFSS, 1999).

Figure 1-7. Percentage of young adults ages 18-24 who are current alcohol users
Massachusetts and United States, 1995-1999



Source: MBRFSS, 1999

OTHER DRUG USE

The abuse of illegal drugs in adolescence can have both short-term and long-term health consequences. High school students who use illegal drugs are at greater risk for physical injuries, suicide attempts, unsafe sexual activity, and school failure (MYRBS, 2001; Substance Abuse and Mental Health Services Administration, 1999). For example, heavy marijuana use can impair cognitive functioning, coordination, and learning (Block, 2000; Mathias, 1998).

Healthy People 2010 Adolescent Objective 26-10 b: Reduce past-month use of illicit substances (marijuana).

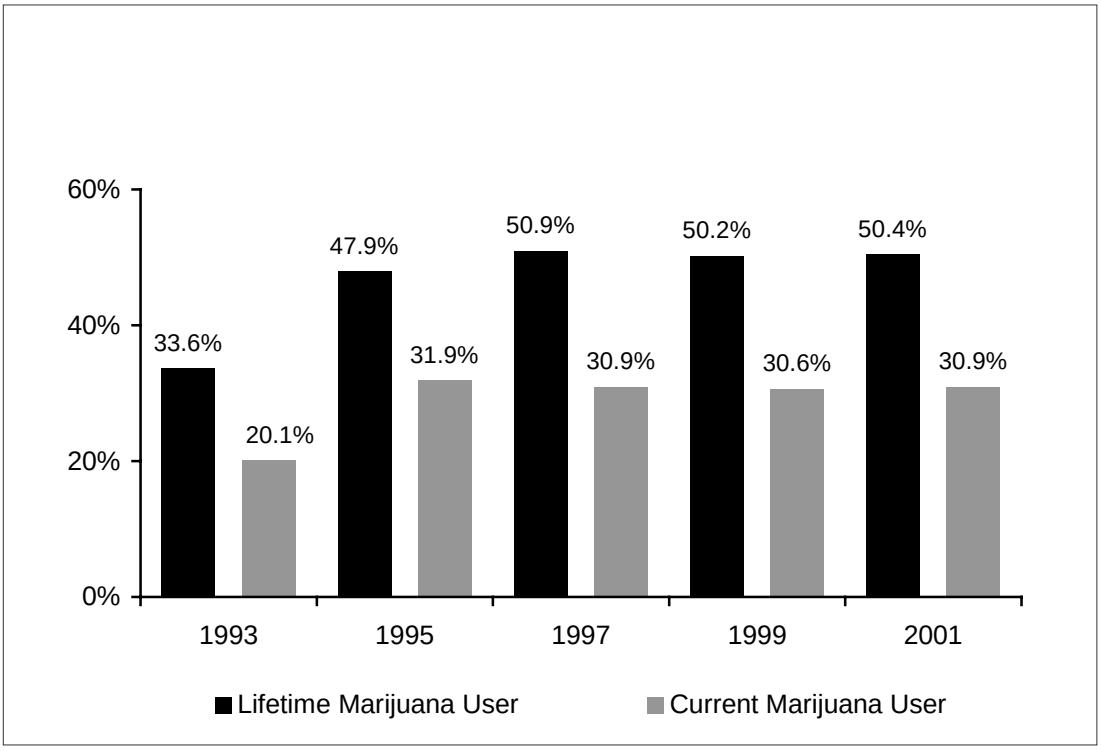
In 2001, three out of ten high school students in Massachusetts used marijuana in the past 30 days, significantly higher than the U.S. average of 24% (Table 1-5). However, after increasing substantially from 1993 to 1995, both current marijuana use and lifetime use have remained level for the past six years (Figure 1-8).

Table 1-5. Percentage of high school students who used marijuana one or more times in the past 30 days Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
30.9%	24%	0.7%

Source: MYRBS, 2001; YRBSS, 2001

Figure 1-8. Percentage of high school students who are lifetime and current marijuana users Massachusetts, 1993-2001



Source: MYRBS, 2001

- Nearly half of Massachusetts high school students (46%) have never used any illegal drugs in their lifetimes, and 72% have never used any illegal drug other than marijuana (MYRBS, 2001).
- Nationally, in 1999, 28% of young adults ages 18-24 reported using marijuana in the past 30 days (Substance Abuse and Mental Health Services Administration, 1999).

EARLY AND RISKY SEXUAL ACTIVITY

Initiation of sexual activity too early can have negative consequences for youth and young adults including teen pregnancy, sexually transmitted diseases, and related future health consequences (Kirby, 2001).

Healthy People 2010 Adolescent Objective 25-11: Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

Four out of five Massachusetts high school students in 2001 either abstained from sexual intercourse or, if sexually active, used condoms (Table 1-6). While somewhat lower than the U.S. percentage, the Massachusetts rate has improved since 1993 (MYRBS, 2001).

Table 1-6. Percentage of high school students who abstain from sexual intercourse or use condoms if currently sexually active
Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
81%	86%	95%

Source: MYRBS, 2001; YRBSS, 2001

- In 2001, the majority (56%) of Massachusetts high school students reported never having had sexual intercourse, similar to the national average of 54%. This represents a slight increase from 51% in 1993 (MYRBS, 2001; YRBSS, 2001).
- One-third of Massachusetts students are currently sexually active, the same as the national average (MYRBS, 2001; YRBSS, 2001).
- Over half (58%) of currently sexually active students used a condom the last time they had sexual intercourse, the same as the national average, and an increase from 52% in 1993 (MYRBS, 2001; YRBSS, 2001).
- Among the 44% of high school students with any history of sexual activity, sexual minority youth were three times as likely as their peers to have had four or more sexual partners in their lifetime (36% vs. 11%) (MYRBS, 2001).

TEEN PREGNANCY

Teen pregnancy has negative consequences for teens, children of teen parents, families, and communities (Kirby, 2001). Children of teen parents have poorer health and educational outcomes, and are more likely to become teen parents themselves (Maynard, 1997).

Healthy People 2010 Adolescent Objective 09-07: Reduce pregnancies among adolescent females.

In 2000, the teen birth rate in Massachusetts was the lowest in 30 years, and was 47% lower than the national average (Table 1-7). Massachusetts had the third lowest teen birth rate in the U.S. (MDPH, 2002; CDC, NVSS, 2002).

Table 1-7. Birth rate* for women, ages 15 - 19
Massachusetts and United States, 2000

Massachusetts	U.S.	HP2010 target
25.8	48.5	**

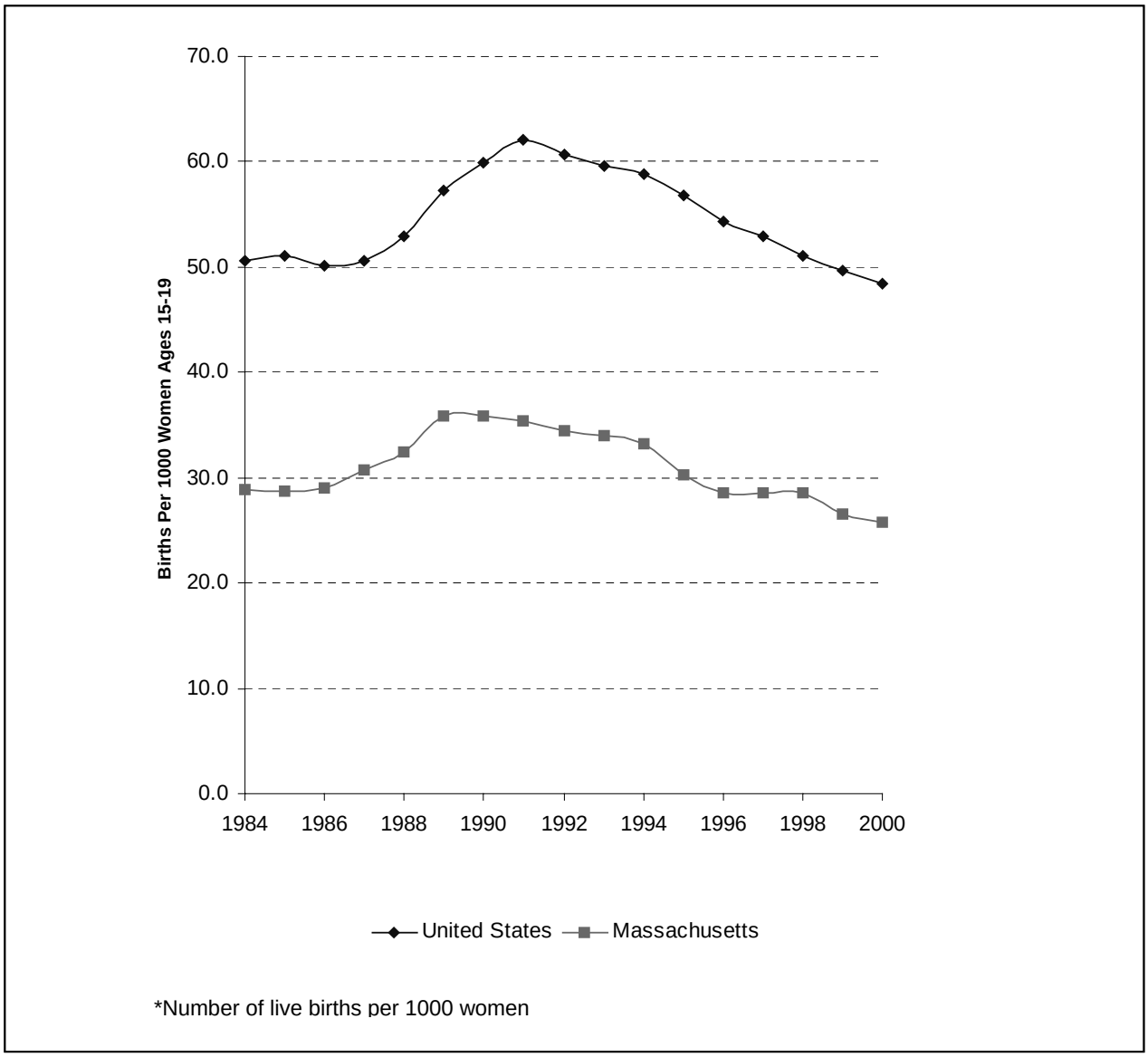
*Number of live births per 1000 women, ages 15 – 19
**Because the HP2010 target is based on pregnancy rate, not birth rate, it is not comparable.
Source: MDPH, 2002; NVSS, CDC, 2002

- The teen birth rate in Massachusetts declined 27% between 1990 and 2000, dropping from 35.4 to 25.8 births per 1,000. The national teen birth rate declined 19% during the same period (Figure 1-9).
- Despite the overall low teen birth rate, Massachusetts has three communities with teen birth rates well above the national average. Lawrence (97.6 per 1,000), Holyoke (87.9 per 1,000) and Chelsea (80.8 per 1,000) had the highest birth rates for 15 –19 year olds in Massachusetts in 2000 (MDPH, *Adolescent Births, 2000,* 2002).
- There is also substantial racial/ethnic disparity among teen birth rates, with the highest rate (for Hispanic teens, 87.2) being more than five times the lowest rate (for White teens, 15.4) (MDPH, *Adolescent Births, 2000,* 2002).

The Teen Challenge Fund

Since initial funding in fiscal year 1987, the mission of the Teen Challenge Fund has been to unite youth, families, and community leaders in the development of local prevention strategies that promote healthy behaviors, responsible decision making, and increased economic, social, and education opportunities for young people 10-19 years of age. Through comprehensive community coalitions, funds are distributed to local community agencies, faith-based organizations, schools, youth groups, and health centers. Programs include life skills development, parent education, mentoring, youth leadership, community service projects, health and sexuality education. Currently 17 coalitions are funded in communities with historically high rates of adolescent pregnancy and other related health, education, and socioeconomic indicators.

Figure 1-9. Birth rate* for women, ages 15 – 19
Massachusetts and the United States, 1984-2000

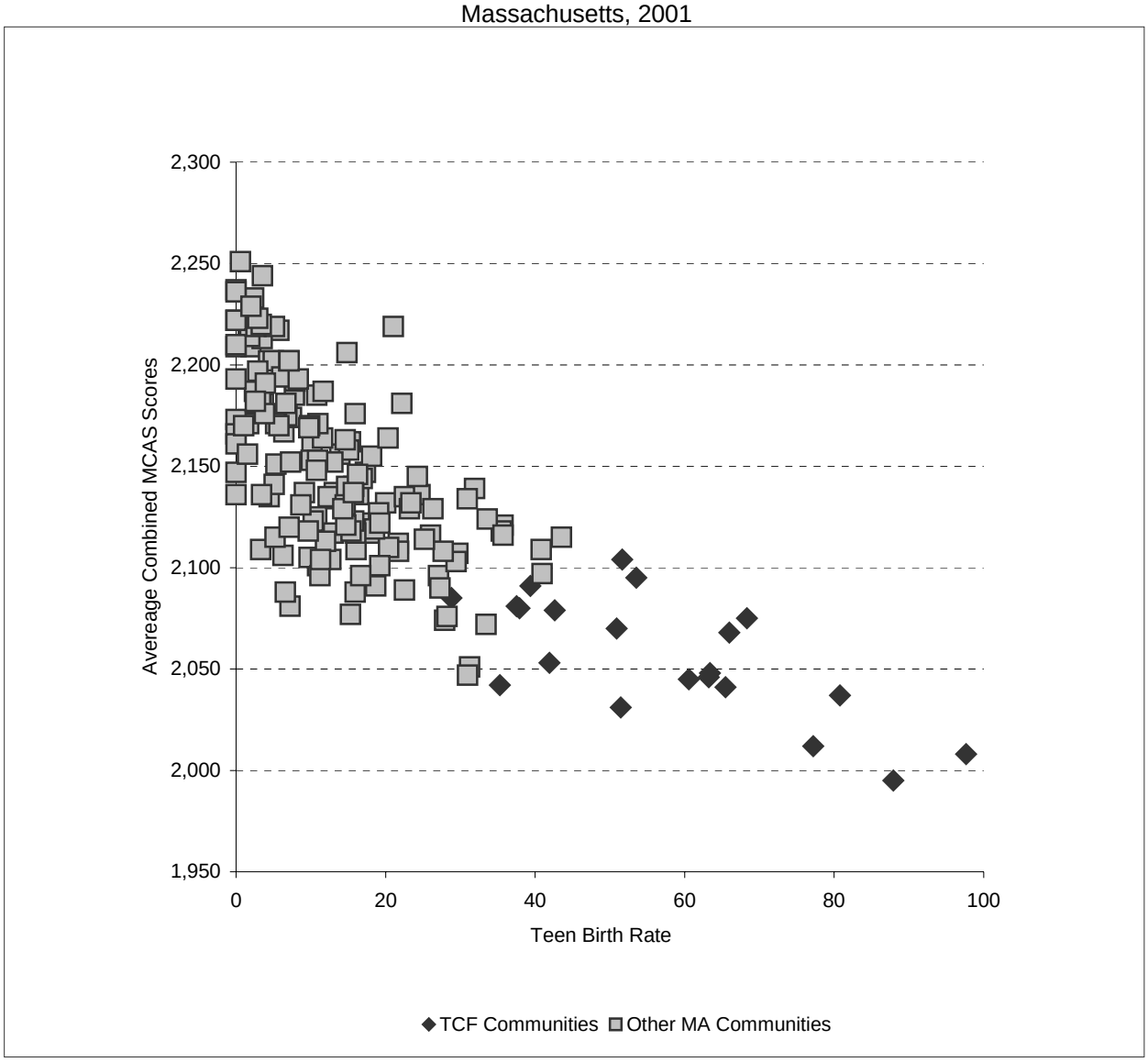


*Number of live births per 1000 women

Source, MDPH, 2000

- High teen birth rates are associated with other risk factors, including poor academic achievement, as measured by average combined scores on the Massachusetts Comprehensive Assessment System (MCAS) (Figure 1-10). While it is impossible to draw conclusions about causal relationships, it is clear that there is an inverse relationship between average MCAS Scores and teen birth rates in a community.

Figure 1-10. Relationship between combined MCAS scores and teen birth rate, by community and Teen Challenge Fund (TCF) grants
Massachusetts, 2001



Source: MDPH, Office of Adolescent Health and Youth Development, 2002

OTHER TEEN PREGNANCY INDICATORS

- Teens are less likely than adult women to receive adequate prenatal care (66.3% vs. 85.0%) (MDPH, *Adolescent Births*, 2000).

- The percentage of births that were low birth weight was 25% higher among births to teens than among births to adult women (9% v. 7%) (MDPH, *Adolescent Births*, 2000).
- In 1999, the infant mortality rate among teen mothers was 9.3, double the rate among mothers ages 20 and older (4.6) (MDPH, *Adolescent Births*, 2002).
- Five percent of female high school students reported ever having been pregnant. The percentage of reported pregnancy was highest among black students (13%) compared to all other racial/ethnic groups (MYRBS, 2001).
- Among high school students with any history of sexual activity, sexual minority youth were more likely than their peers to report having ever been or gotten someone pregnant (27% vs. 11%) (MYRBS, 2001).

SEXUALLY TRANSMITTED DISEASES

Sexually transmitted diseases (STDs), with the exception of syphilis, disproportionately affect 15-19 year olds in Massachusetts. Adolescents and young adults are at a higher risk for acquiring STDs. They may be more likely to have multiple (sequential or concurrent) sexual partners; they may be more likely to engage in unprotected intercourse; and they may select partners at higher risk. In addition, for some STDs (e.g., chlamydia), adolescent women may have an increased susceptibility to infection due to the immaturity of cells present in the cervix.

- From 1997-2001, STD rates for chlamydia and gonorrhea among youth ages 15-19 increased substantially (Table 1-8). Syphilis rates, already quite low, decreased slightly. There are significant racial/ethnic and gender disparities in STD rates.

Table 1-8. STD rates* for 15-19 year olds, by gender and race/ethnicity
Massachusetts, 1997-2001

	Males			Females			Total
	White	Black	Hispanic	White	Black	Hispanic	
Gonorrhea							
1997	5	509	186	38	1226	419	129
1998	6	349	272	45	1318	421	137
1999	8	547	307	42	1426	529	148
2000	8	583	173	57	1943	523	155
2001	9	562	286	47	1387	697	166
Chlamydia							
1997	18	676	364	316	3679	2940	621
1998	17	600	492	367	4338	4175	680
1999	27	881	692	360	4384	3653	728
2000	28	1111	850	381	5748	4386	760
2001	38	995	1056	321	4166	5388	841
Syphilis							
1997	0	15	21	1	23	29	3
1998	0	8	15	0	15	50	3
1999	0	0	7	0	8	15	1
2000	0	18	13	2	9	13	2
2001	0	0	0	0	31	15	2

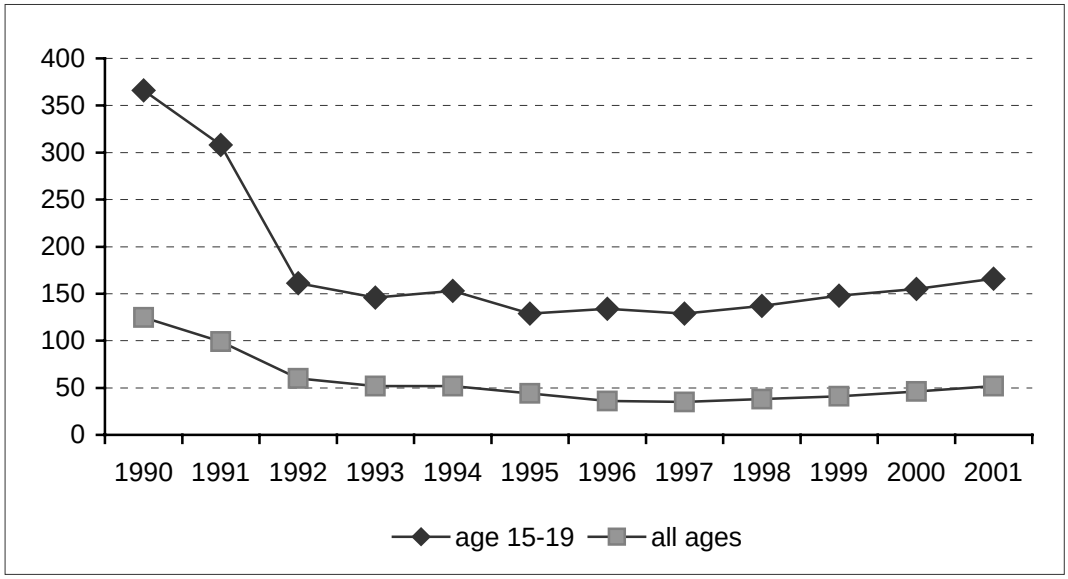
*Reported cases per 100,000 residents in age group
Source: BCDC, MDPH, 2002

- Among youth with any history of sexual activity, sexual minority youth were more likely than their peers to report having been diagnosed with a sexually transmitted disease (9% vs. 3%, respectively).

GONORRHEA

- Gonorrhea rates among all age groups and populations had decreased steadily from the mid-1980s through the mid-1990s, although rates for 15-19 year olds remained higher. Since 1998, rates have increased slightly (Figure 1-11).

Figure 1-11. Gonorrhea rate* for all ages and ages 15-19
Massachusetts, 1990-2001
* Reported cases per 100,000 residents in each age group



Source: BCDC, MDPH, 2002

CHLAMYDIA

Chlamydia is a major public health problem. With 4 to 10 million new cases each year, chlamydia is the most commonly reported bacterial STD in the U.S.

Healthy People 2010 Adolescent Objective 25-01: Reduce the proportion of adolescents and young adults with chlamydia trachomatis infections.

Chlamydia rates among youth ages 15-19 have steadily increased, from 621 per 100,000 in 1997 to 841 per 100,000 in 2001, with a total of 10,402 cases in this age group (MDPH, 2002).

- Massachusetts youth ages 15-19 consistently have higher reported rates of chlamydia than does the general population.
- The Healthy People 2010 target for reducing chlamydia infections is not comparable with Massachusetts data. The HP2010 target is based on infections among youth ages 15-24 attending family planning or STD clinics (Table 1-9), while Massachusetts data are based on the total population of 15-19 year olds.

Table 1-9. Percentage of youth ages 15-19 with chlamydia trachomatis infections Massachusetts and United States, 2000

Massachusetts	U.S.	HP2010 target
*	**	3.0%***

*Data not comparable.
** Data not available.
***Target for 15-24 year olds.
Source: NVSS, CDC, 2002

Chlamydia Screening Program

The Department of Public Health has increased the availability of chlamydia screening services to people less likely to have routine access to such testing, particularly teens. Thus, chlamydia screening has been more available in Department of Youth Services' facilities, jails, homeless shelters, school-based clinics and adolescent clinics. DPH has also expanded screening opportunities at family planning clinics. Increased screening, beginning in 1996, has led to increased diagnosis of asymptomatic chlamydia infection and, therefore, explains some of the increase in reported cases. Teens diagnosed in DPH-funded screening programs with a second STD have now been designated as priority cases. DPH Disease Intervention Specialists follow-up and interview these teens to provide additional counseling, offer assistance with notifying partners, and facilitating access to treatment. A demonstration project conducted with teen peer leaders in Springfield showed the positive impact of having teens work with clinicians and parents to improve the adults' communication skills with teens. This work also was associated with improved healthcare-seeking behaviors on the part of teens.

HIV / AIDS

As the HIV/AIDS epidemic continues to evolve, youth and young adults are disproportionately affected. Globally, 40% of people newly affected with HIV each year are 15-24 years old. Most youth with HIV in the U.S. now acquire it through heterosexual sex.

Due to the long latency, many adults diagnosed with AIDS may have acquired HIV infection in adolescence. There are also now youth who were born with HIV.

Healthy People 2010 Adolescent Objective 13-05: Reduce the number of cases of HIV infection among adolescents and adults. (Note: This is a developmental objective for which a specific indicator and target have not yet been established through HP 2010.)

As of July 1, 2001 there were 600 youth and young adults, ages 13-24, living with HIV in Massachusetts, the majority of whom (81%) were ages 20-24 (Table 1-10) (MDPH, HIV/AIDS Surveillance Program, 2001).

Table 1-10. People living with HIV infection, ages 13-19 and 20-24, by gender and race/ethnicity
Massachusetts, July 1, 2001

Demographic characteristic	Age at Diagnosis*					
	13-19		20-24		13-24	
	N	%**	N	%**	N	%**
Gender:						
Male	55	48%	280	58%	335	56%
Female	59	52%	206	42%	265	44%
Total	114		486		600	
Race / Ethnicity:						
White (non-Hispanic)	35	31%	223	46%	258	43%
Black (non-Hispanic)	27	24%	89	18%	116	19%
Hispanic/Latino	51	45%	158	33%	209	35%
Asian / Pacific Islander	1	1%	8	2%	9	2%
American Indian/Alaskan Native	0	0%	3	1%	3	1%
Unknown	0	0%	5	1%	5	1%
Total	114		486		600	

*People who were ages 13-19 or 20-24 at the time of their HIV diagnosis. Data does not include 214 youth, ages 13 – 24, who were infected prior to age 13.
** Percentages may not add up to 100% due to rounding
Source: MDPH HIV/AIDS Surveillance Program, 2001

- Among young adults living with HIV, the majority (58%) are male, but among youth ages 13-19, females are now the majority (52%).
- Adolescents of color are disproportionately represented among youth and young adults living with HIV, with the disparity being greater in the 13-19 year-old group.
- The most frequent exposure mode is male sex with males (31%), followed by injection drug use (24%), heterosexual sex (19%), and presumed heterosexual sex (18%) (Table 1-11). Among youth ages 13-19, however, heterosexual sex (25%) and presumed heterosexual sex (25%) are more prevalent exposure modes than injection drug use (13%). (These data do not include 214 youth ages 13-24 who contracted HIV prior to age 13) (MDPH, HIV / AIDS Surveillance Program, 2001).

Table 1-11. People living with HIV infection, ages 13-19 and 20-24,
by reported exposure mode
Massachusetts, July 1, 2001

	Age at Diagnosis*					
Exposure Mode	**13-19**		**20-24**		**13-24**	
	N	**%****	**N**	**%****	**N**	**%****
Male sex with male (MSM)	35	31%	149	31%	184	31%
Injection drug use (IDU)	15	13%	129	27%	144	24%
MSM/IDU	3	3%	18	4%	21	4%
Heterosexual sex:	29	25%	87	17%	116	19%
• -Heterosexual sex w/IDU	17	15%	45	9%	62	10%
• -Heterosexual sex w/ person w/ HIV or AIDS	12	11%	38	8%	50	8%
• -Female sex w/ bisexual male	0	0%	4	1%	4	1%
• -Other heterosexual sex	0	0%	0	0%	0	0%
Presumed heterosexual	28	25%	80	16%	108	18%
Blood / blood products	1	1%	2	<1%	3	<1%
Other	0	0%	0	0%	0	0%
No identified risk	3	3%	21	4%	24	4%
Total	114		486		600	

*People who were age 13-19 or 20-24 at the time of their HIV diagnosis
**Percentages may not add up to 100% due to rounding.
Source: MDPH HIV/AIDS Surveillance Program, 2001

Other HIV / AIDS - related indicators

- In 2001, less than two percent (1.7%) of high school students reported ever having used a needle to inject an illegal drug (2.4% male, 0.9% female) (MYRBS, 2001).
- Among high school students who reported ever having any sexual contact, 16.5% have been tested for HIV and 17.7% have been tested for another STD. Of students who ever had sexual intercourse, 20.5% have been tested for HIV and 22.0% have been tested for another STD (MYRBS, 2001).
- Ninety-four percent of Massachusetts high school students reported that they have been taught about HIV or AIDS in school. This is the highest percentage in the U.S. (MYRBS 2001).
- Forty-seven percent of students reported that they had a conversation in the last year with parents or other adults in their family about sexuality, ways to prevent HIV infection, other STDs, or pregnancy (MYRBS 2001).

MENTAL HEALTH

SUICIDE

Healthy People 2010 Adolescent Objective 18-01: Reduce the suicide rate.

In 2000, the suicide rate for youth ages 15-24 was 6.5 per 100,000 residents in the age group (Table 1-12). In each age group, the suicide rate is significantly below the national average.

- Suicide was the cause of 13% of all deaths (n= 53 suicide deaths) among 15-24 year olds and was the second leading cause of death after motor vehicle crashes (MDPH, BHSRE, 2002).

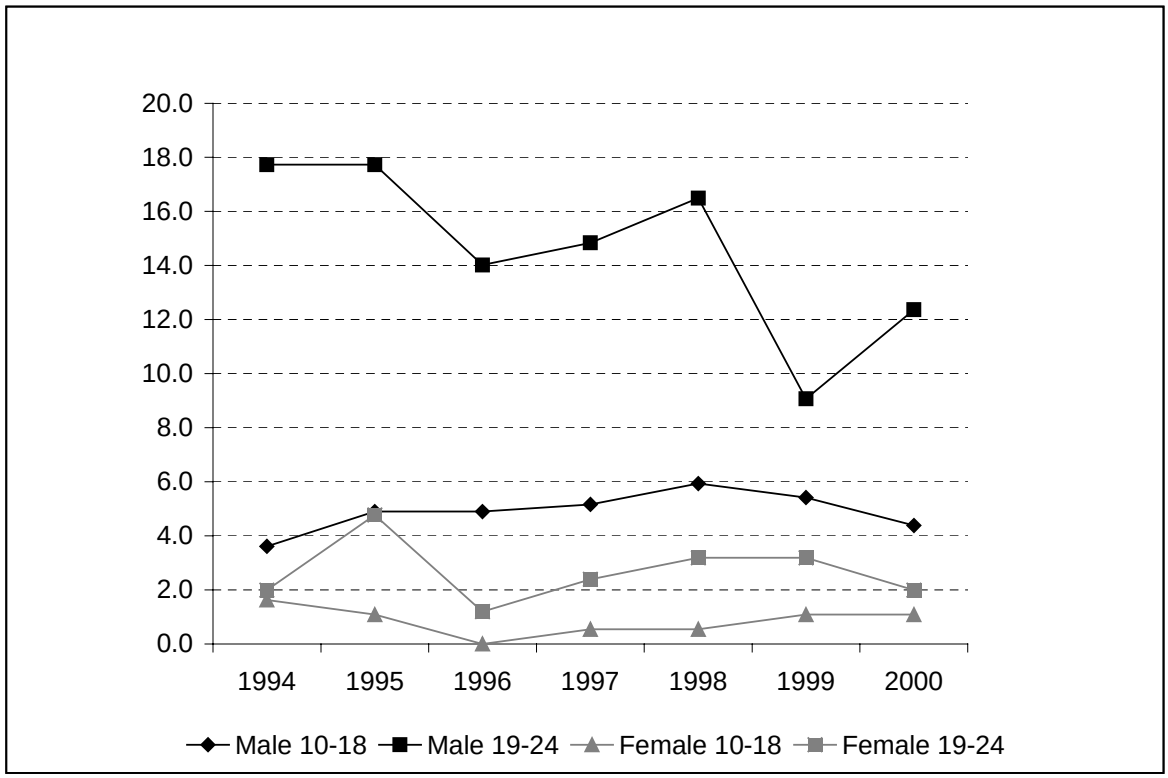
Table 1-12. Suicide rate*, by age group
Massachusetts and United States, 2000

Age Group	Massachusetts	U.S.	HP2010 target
15-19 year olds	5.3	8.2	**
20-24 year olds	8.7	12.8	**
15-24 year olds	6.5	10.4	**

*Deaths per 100,000 population in each age group
** 2010 target not provided for adolescent/young adult age group
Source: MDPH, BHSRE, 2002; CDC NCIPC, 2002

- The suicide rate for male youth is significantly higher than for females (Figure 1-12). For young men ages 19-24, the suicide rate in 2000 was more than six times that for young women (12.4 vs. 2.0). For youth ages 10-18, the suicide rate for males in 2000 was more four times that for females (4.4 vs. 1.1).

Figure 1-12. Suicide rate* by sex and age, 10 – 24 year olds
Massachusetts, 1994 - 2000



*Suicides per 100,000 population in each population group
Source: MDPH, 2002

Healthy People 2010 Adolescent Objective 18-02: Reduce the rate of suicide attempts by adolescents.

In 2001, 9.6% of Massachusetts high school students reported that they attempted suicide, similar to the national average (Table –13).

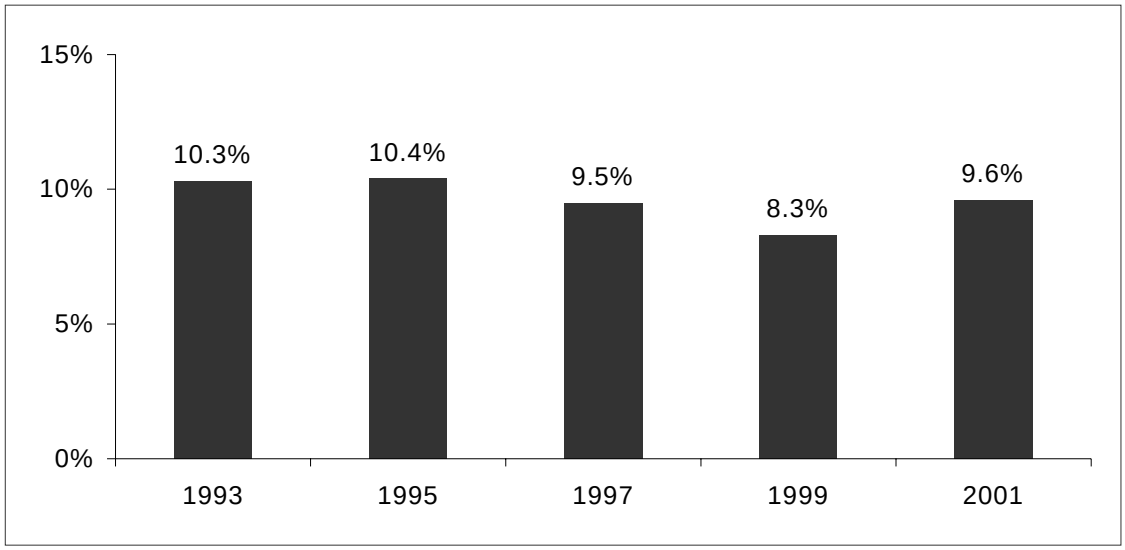
Table 1-13. Percentage of high school students who attempted suicide in the past year Massachusetts and United States, 2001

Massachusetts	U.S.	HP2010 target
9.6%	9%	1%

Source: MYRBS, 2001; YRBSS 2001

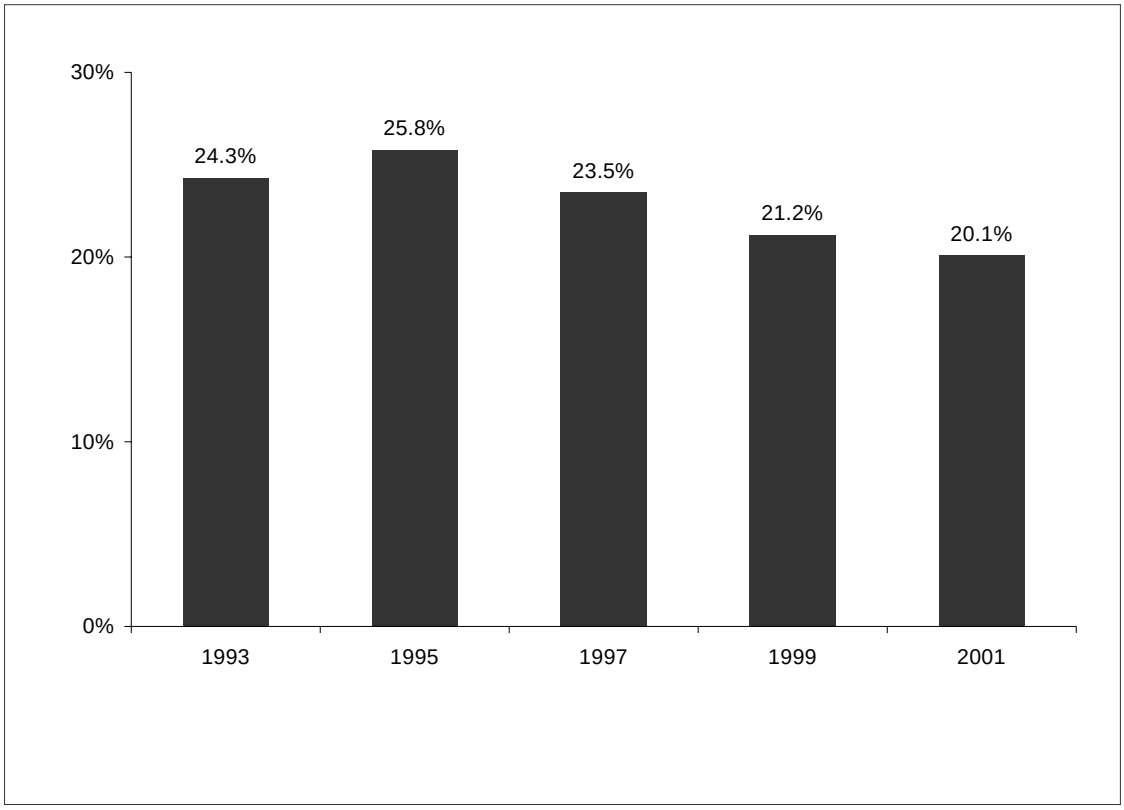
- After declining from 1995-1999, the rate of suicide attempts increased in 2001 (Figure 1-13). Thirty-six percent of these suicide attempts by Massachusetts youth required medical attention (MYRBS, 2001).
- However, there has been a significant decrease in the percentage of students who reported that they seriously considered a suicide attempt, and also in the percentage that made a plan about how they would attempt suicide (Figure 1-14). Sexual minority youth are at an elevated risk for suicide. In 2001, 31% of sexual minority high school students attempted suicide, compared to 8% of other students (MYRBS, 2001).
- Twenty-nine percent of high school students reported that in the past year there had been a period of two weeks or more in which they felt so sad and hopeless that they had stopped doing some usual activities (MYRBS, 2001)**.**
- Females reported more suicidal behaviors, and felt sad and hopeless at higher rates than males (MYRBS, 2001).

Figure 1-13. Percentage of high school students who attempted suicide in the past year Massachusetts, 1993-2001



Source: MYRBS, 2001

Figure 1-14. Percentage of high school students who seriously considered suicide in past year
Massachusetts, 1993-2001



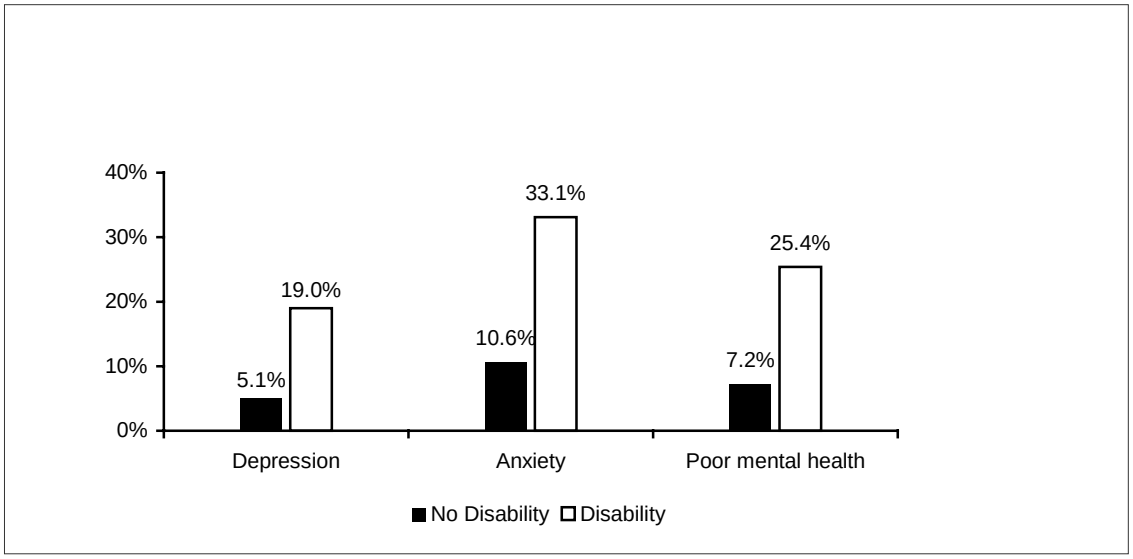
Source: MYRBS, 2001

Healthy People 2010 Adolescent Objective 06-02: Reduce the proportion of children and adolescents with disabilities who are reported to be sad, unhappy or depressed.

There are significant differences in the mental health status of 18-24 year-olds with disabilities compared to those without disabilities.

- Individuals with disabilities were much more likely to report 15 or more days being sad, blue, or depressed in the past month (19%) when compared to individuals without disabilities (5%).
- One-third of 18-24 year olds with disabilities (33%) reported being worried, tense, or anxious for 15 or more days in the past month compared to 11% of those without disabilities.
- In addition, one in every four 18-24 year olds with disabilities (25%) reported 15 or more days of poor mental health compared to 7.2% of 18-24 year-olds without disabilities (MBRFSS, 2000).

Figure 1-15. Percentage of 18-24 year old residents who reported depression, anxiety, or poor mental health for 15+ days in the past month
Massachusetts, 2000



Source: MBRFSS, 2000

IMMUNIZATION

Vaccines were among the greatest public health achievements of the 20th century. Immunizations prevent disability and death from infectious diseases for individuals and help control the spread of infections within communities (Healthy People 2010). While there are no adolescent critical objectives for this leading health indicator, there are several specific objectives related to youth.

Massachusetts maintains an outstanding record of childhood immunization, exceeding the national average for immunization series for 2-year-olds (National Immunization Survey, 2000). However, illness and disability caused by vaccine-preventable diseases - including hepatitis B, measles, and varicella (chickenpox) - continue among youth. The challenges of a mobile population, including at-risk youth in urban and rural areas and recently immigrated youth, require that constant vigilance be maintained to ensure that youth have completed their primary series of immunizations (Table 1-14).

Table 1-14. Percentage of Students Entering 7th Grade with Completed Immunization Series
Massachusetts, 2001-2002

No. of entering 7th graders	More than 1 Measles, Mumps, and Rubella Vaccination	Hepatitis B series completed	Varicella (chickenpox) vaccination	Immunity to varicella (chickenpox)	Tetanus and diphtheria booster
87,023	99%	83%	13%	91%	89%

MDPH Immunization Program, 2001-2002

- The three injections that compose the Hepatitis B (HBV) series represent the first vaccine that can prevent a major cause of liver disease and potential transfer of a sexually transmitted disease. While universal infant immunization for HBV began in 1992 and catch-up for older children is done prior to entry to 7th grade, there are older youth who have not been fully vaccinated.

ACCESS TO HEALTH CARE

Access to health care is a critical component of adolescent health. Adolescents have historically had low rates of insurance and service utilization, which contribute to a lack of preventive care (Brindis et al., 1999).

CHILDREN AND YOUTH

As the result of major expansions in MassHealth (Medicaid) eligibility since 1998 (which incorporate the federal Children's Health Insurance Plan) and the availability of the Children's Medical Security Plan (CMSP), Massachusetts has one of the highest rates of health insurance coverage for youth in the nation.

- The rate of uninsured children and youth through age 18 decreased by over 50% from 6.3% in 1998 to 3.0% in 2000. The uninsurance rate for youth ages 13-18 decreased from 5.2% in 1998 to 3.3% in 2000 (Division of Health Care Finance and Policy, 2001).
- Hispanic children and youth are more likely to be uninsured than are other racial or ethnic groups (5.5% vs. 3.3%) (Division of Health Care Finance and Policy, 2001).
- During fiscal year 2001, 212,960 youth ages 10-18 were enrolled in MassHealth (DMA, 2002).

YOUNG ADULTS

- The rate of uninsured young adults ages 19-24 decreased from 19.5% in 1998 to 17.0% in 2000. However, this age group has the highest uninsured rate of all age groups in Massachusetts **(**Division of Health Care Finance and Policy, 2001).
- During fiscal year 2001, 94,030 young adults ages 19-24 were enrolled in MassHealth (DMA, 2002).
- In 1998-2000, male young adults were twice as likely to be uninsured as were females. Uninsured males were four times more likely to report not having had a check-up in the previous two years than were males with health insurance. This association was not true for females (Callahan et al, 2001).

YOUTH WITH DISABILITIES

An ongoing issue for youth and young adults with disabilities is that the adult health care system is not fully equipped to provide care to adults with disabilities, particularly those with childhood-onset conditions. Lack of appropriate adult primary and preventive care is one of numerous barriers to transition from pediatric or youth to adult medical care. As a result, many young adults with disabilities remain with their pediatric providers well into adulthood, thus potentially increasing the risk of not receiving age-appropriate care (Timmons et al., 1997). (See *Technical Notes* for discussion of barriers to transitioning to adult care for youth with disabilities.)